METHOD FOR GENERATING CARRIER RESIDUAL SIGNAL AND ITS DEVICE

ABSTRACT

A method for generating a carrier residual signal and its device, in which a heterodyne optical signal used in a photometric field or an optical fiber radio communication field can be stably generated with a simplified structure.

The device for generating a carrier residual signal includes an optical modulating unit that includes a light source 51 generating a light wave having a specific wavelength, and an SSB optical modulator 54, wherein a light wave emitted from the light source enters into the optical modulating unit, a light wave emitted from the optical modulating unit includes a carrier component related to a zero-order Bessel function and a specific signal component related to a specific high-order Bessel function while suppressing signal components other than the specific signal component related to the specific high-order Bessel function, and a ratio of optical intensity between the carrier component and the specific signal component is set substantially to 1.

Preferably, the optical modulating unit includes a bypass optical waveguide 56 hat connects the SSB optical modulator with an input unit and an output unit of the SSB optical modulator.